

## REMARKS

Claims 1-27 were pending.

Claims 1-27 are rejected.

Claims 1, 14 and 27 are amended.

Claims 2, 4-11, 20-22, 24-25 are cancelled.

Claims 1, 3, 12-19, 23 and 26-27 are pending.

### **Amended Claims 1, 2 14 and 27**

Claim 1 is amended to clarify the antecedent basis for "the second flocculant particulates". Claim 1 is further amended to include adding the limitations:

The aqueous suspension is limited to sewage sludge. Support may be found on page 11, line 14.

- Step iii.) is carried out using conventional mixing equipment. Basis for this amendment may be found on page 6, line 10.
- Step vi.) is amended to require that the suspension be subjected to compression dewatering. Basis for this amendment may be found on page 6, lines 15-20.
- Additionally, the first flocculant is limited to cationic acrylamide polymers. See examples, page 14, lines 6-8 and the second flocculant is limited to a polymer formed from 80 to 100% by weight methyl chloride quaternary ammonium salt of dimethyl amino ethyl (meth)acrylate and 0 to 20% by weight acrylamide of intrinsic viscosity between 3 and 10 dl/g. Support for this amendment may be found in original claim 9 and page 9, lines 19-23.
- The swellable particulate polymer is amended to specify a particle diameter of at 50 microns. Support for this amendment may be found in original claim 4.

Claim 14 is amended to make consistent with claim 1. Claim 27 is amended to correct the misspelling of "memi" to "semi"

No new matter is added.

**Claims 1-13, 15-17 and 20-27 are rejected under 35 USC 103(a) as being unpatentable over McGrow, US 5,213,693 in view of Stevenson 5,370,800 and Batty, US 5,834,545.**

McGrow describes the flocculation and dewatering of a suspension of organic solids by filtration on a filter press or belt press by substantially distributing throughout the suspension dissolved cationic

coagulant polymer that has an intrinsic viscosity between 0.2 and 3 dl/g and dissolved cationic flocculant polymer that has an intrinsic viscosity above 5 dl/g.

Examiner agrees that the present claims differ from McGrow by reciting a process which includes producing a thickened suspension by the release of free water and the mixing of the second flocculant in the form of a particulate polymer with the thickened suspension.

Examiner alleges that Stevenson discloses that it is known to remove water from floccules and then mix a second flocculating polymer with floccules, and dewater. Batty teaches that it is known in the art to mix flocculant composition including polymer particles to aid in dewatering.

Applicants submit that claims as they now stand are directed to sewage sludge. While McGrow is directed to sewage sludge, Stevenson is directed to methods of removing metal compounds from waste water and makes no mention of sewage sludge. Thus one skilled in the art of improving the flocculation of a sewage sludge would hardly look to Stevenson for likely modification steps.

And while Batty teaches that it is known in the art to mix flocculant compositions including polymer particles with a suspension, Batty also teaches that it is generally desired to dissolve the dispersion particles, and thus the polymer particles, initially into water to form a dilute solution of polymer (typically have a polymer concentration of 0.01 to 3%) and then to add this dilute solution to the suspension or other medium that is to be treated. See col. 7, lines 8-13.

Thus applicants submit that there is simply not enough direction in the combination of references to modify McGrow to arrive at the presently claimed method. One skilled in the art would have to apply the thickening step of Stevenson which is taught for removing metal compounds (not sewage sludge) apply to a sewage sludge, then to further alter the thickening step of Stevenson in the method of McGrow by mixing the second flocculant in a particle form throughout the thickened substrate when Batty teaches the general conditions for using the dispersion particles is to first dissolve the particles.

Further, applicants bring to the examiner's attention that data sets 3 and 4, page 17 of the disclosure show significant and unexpected performance advantages when step iii.) is carried out, that is mixing of the thickened suspension, wherein the second flocculant particulates are distributed throughout the thickened suspension of step ii.), using conventional mixing equipment.

In order to address the examiner's concerns that the results discussed in the Declaration and shown in the examples are not commensurate with the scope of the instant claims, applicants have amended the claims to reflect the showing. Applicants have amended the claims to require a defined second and first flocculants, a dry polymer particle size, a conventional mixing technique and a compression dewatering stage.

Applicants retain the right to file a continuation to recover the deleted matter amended from the claims.

Therefore, applicants believe the claims are now allowable and respectfully request reconsideration of the claims.

**Claims 14 is rejected under 35 USC 103(a) as being unpatentable over McGrow et al. US 5,213,693 in view of Stevenson , US 5,370,800 and Batty , US 5,834,545 as above and further in view of Sorensen US 5,846,433.**

**Claims 18 and 19 are rejected under 35 USC 103(a) as being unpatentable over McGrow et al. US 5,213,693 in view of Stevenson , US 5,370,800 and Batty , US 5,834,545 as above and Sorensen US 5,846,433 and further in view of Ghafoor US 6,001,920.**

The above 2 rejections rely on McGrow, Stevenson and Batty. As argued above the references do not adequately provide direction for one skilled in the art to arrive at the presently claimed method. Further, even if the references are combined, the previously submitted Declaration and examples of the disclosure (data sets 3 and 4) show unobvious and unexpected performance when mixing occurs in the thickened sewage suspension wherein the second flocculant particulates are distributed throughout the thickened suspension.

Thus applicants believe these rejections are overcome.

### **Double Patenting Rejections**

Claims 1-11, 18 and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 5-14 of copending 10/591,776 (Case 22354).

Applicants request to put off the submitting of terminal disclaimers until the state of the allowed claims is known. At that time, the suitability of such disclaimers can better be determined.

Reconsideration and withdrawal of the rejection of claims 1, 3, 12-19, 23 and 26-27 is respectfully solicited in light of the remarks and amendments *supra*.

Since there are no other grounds of objection or rejection, passage of this application to issue with claims 1, 3, 12-19, 23 and 26-27 is earnestly solicited.

Applicants submit that the present application is in condition for allowance. In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,



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